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Philosophical Transactions

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IX *An Account of Books: I. Joannis Poleni in Gymnasio Patavino Phil. Ord. Prof. & Scient. Societatum Regalium, quæ Londini & Berolini sunt, Sodalis, De Mtu Aquæ mixto, Libri duo, &c. 4^{to}. Patavii 1717. II. Apollonii Pergæi Conicorum Libri Octo & Sereni Antisthenis de Sectione Cylindri & Coni Libri duo. Fol. Reg. E Theatro Oxon. 1710.*

I. *An Advertisement to Astronomers, of the Advantages that may accrue from the Observation of the Moon's frequent Appulses to the Hyades, during the Three next ensuing Years.*

OF all the Methods hitherto propos'd for finding the *Longitudes* of Places for Geographical Uses, none seems more adapted to the purpose, than that by the *Occultations* of the fixt Stars by the *Moon* observed in distant Parts: For those Immersions of the Stars which happen on the dark Semicircle of the Moon, and their Emergences from the same, are perfectly momentaneous, without that Ambiguity, to which the Observations of the Eclipses of the *Moon* and those of *Jupiter's Satellites* are subject. Besides, whilst the Moon is horned, and her weaker Light less dazling, an ordinary short Telescope, such as by Experience is found to be manageable on Ship board, suffices to observe those Moments, even in the Occultations of very minute Stars: On which account, this way seems to bid fairest for the desired Solution of the grand Problem of finding the Longitude at Sea. But since it would be needless to enquire exactly what Longitude a Ship is in, when that of the Port to which she is bound is still unknown, it were to be wish'd that the Princes of the Earth would cause such Observations to be made, in the Ports and on the principal Head-Lands of their Dominions, each for his own, as might

might once for all settle truly the Limits of the Land and Sea. This Work however being likely to be left to the Care and Curiosity of private Persons, it may not be amiss hereby to give notice of the present Opportunity of performing it, in this our Northern Hemisphere, by help of the frequent Appulses of the Moon to the more Southerly of the *Hyades*, many of which she eclipses in each monthly Revolution, and will continue so to do, during the Years 1718, 1719, and 1720.

These Stars are but Three or Four in all former Catalogues, but the *British* of Mr *Flamsteed* encreases them to Sixteen; to them we have added Three others somewhat smaller, *viz.* *c*, *i*, and *n* in the Figure of the *Hyades* hereto annexed. In it the principal Stars are markt with *Bayer's* Marks, and the rest with the Letters of the *Italic* Alphabet; their Longitudes are fitted to the beginning of the Year 1718, and being truly laid down, may serve to instruct the curious Observer, when and where to look for them, when the Moon is among them.

It appears by this Scheme that the Distance between *a* and *α* or *Palilicium*, is about Nine Hours Motion of the Moon, in which time supposing her to pass from one to the other, she must eclipse *γ* and *e*, and Four or Five of those about *θ*, and must apply very close, with her Southern Limb, to all those which have about Six Degrees South-Latitude; which would be a very entertaining Sight for the Lovers of these Arts. But if the Times of the Occultations of any One of these Stars, or even of any Two of them in the same Night, be accurately observed under distant Meridians, the difference of those Meridians may be truly obtain'd thereby; especially since the *Moon's Parallax*, and all other parts of her Theory thereto required, are at present sufficiently stated and known.

For the sake of such as are willing to make use of this Method, we have added the Places of all the *Hyades* fitted to the present Time, and chiefly taken from the *British* Catalogue, which being faulty in the Stars we call *k* and *l*, we have here rectified them.

Catalogus Hyadum, ineunte Anno 1718.

Stellarum NOMINA.		Long. II	Lat. Ant.	Ma.
<i>Quæ præcedit γ Tauri</i> ——— a	0	51 35	50 14	7
<i>In naribus Tauri, Bayero γ</i>	1	50 54	5 46 22	3
<i>Quæ sub γ</i> ——— b	1	56 31	6 19 57	7
<i>In Origine Nasi Tauri</i> ——— c	2	54 25	4 47 5	7
<i>Inter nares & oculum Tauri</i> } δ	2	54 47	4 0 34	3
<i>Boreum</i> ——— ——— }				
<i>Huic contigua ad Austrum.</i> ——— d	3	10 33	4 9 4	6
<i>Præcedentium θ Borealis</i> ——— e	3	17 21	5 41 50	8
<i>Earum Australis clarior.</i> ——— f	3	25 32	6 2 41	6
<i>Quæ sequitur δ</i> ——— g	3	35 23	43 27	5
<i>Contiguarum inter nares & }</i> θ				
<i>Palilicium Borea</i> ——— }	3	59 45	5 47 16	4
<i>Earundem Australior</i> ——— θ	4	0 11	5 52 55	4
<i>Duarum supra θ Borea</i> ——— h	4	2 32	5 23 43	7
<i>Earundem Australior</i> ——— i	4	7 44	5 36 40	8
<i>Sub θ trium in recta præcedens</i> k	4	19 27	6 9 45	4
<i>Earum media</i> ——— l	4	26 55	6 7 35	7
<i>2^{ma} θ sequentium Borea</i> ——— m	4	20 26	5 37 49	7
<i>Oculus Boreus Tauri</i> ——— e	4	30 31	2 35 58	3
<i>Sequentium θ Australis</i> ——— n	4	32 35	5 41 00	8
<i>Trium sub θ sequens</i> ——— o	4	45 55	6 0 35	7
<i>Palilicium Bayero α</i>	5	50 20	5 29 50	1
<i>Quæ hanc sequitur proxime</i> — p	6	17 35	6 3 20	7
<i>Contig. sequentium Australis</i> — q	6	30 34	6 19 19	6
<i>Borea & clarior</i> ——— σ	6	33 12	6 12 35	7